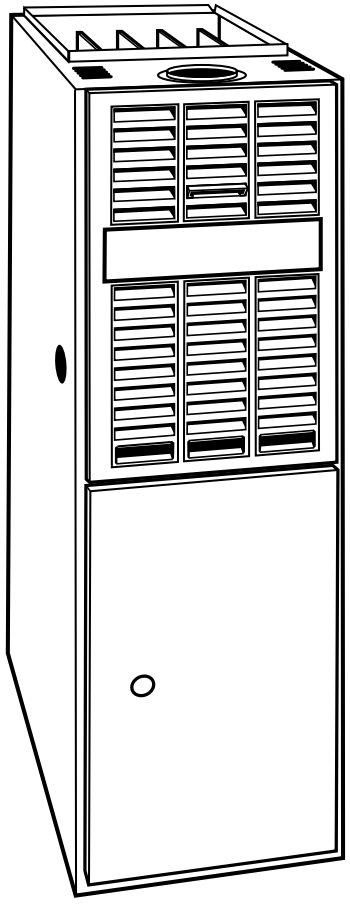
bryant
Heating & Cooling Systems

ENERGY-EFFICIENT INDUCED-COMBUSTION UPFLOW FURNACE

395CAV
Sizes 045 thru 155
Series G



With a unique approach to induced-combustion design, a 40-in. tall cabinet, 4-pass heat exchanger, an inshot burner system, and its safety features, this furnace is without peer. The model 395CAV Deluxe Induced-Combustion Upflow Furnace achieves one of the highest Annual Fuel Utilization Efficiency (AFUE) ratings available in a noncondensing, induced-combustion furnace. Its ease and economy of installation, ease of serviceability, economical initial cost, and short payback time put it in a class well ahead of the competition. The model 395CAV Gas Furnace has the kind of overall performance needed in today's homes.

FEATURES

EFFICIENCY—The 395CAV Deluxe Induced-Combustion Gas Furnace provides the efficiency customers want with 80.0 percent AFUE.

HOT SURFACE IGNITION—This field proven ignition system will save energy and improve reliability.

ALUMINIZED HEAT EXCHANGER—The patented 4-pass heat exchanger is made of aluminized steel and backed by a 20-year Limited Warranty.

INTELLIGENT CONTROL BOARD—The 395CAV Furnace has an intelligent control board with an LED status indicator light to ensure top furnace performance. This control board also has a self-test feature that enables the servicing technician to verify operation of the board itself, the inducer, the hot surface ignitor, both high- and low-speed blower operation, and the humidifier. The board also features a 3-amp fuse that protects the transformer and board. We guarantee the reliability of the control board with a 3-year Limited Warranty.

40-IN. HEIGHT—The 395CAV Deluxe Induced-Combustion Furnace with a 40-in. cabinet height simplifies installation in alcoves, attics, basements (ideal for short basement), closets, and utility rooms, especially with a high-efficiency cooling coil.

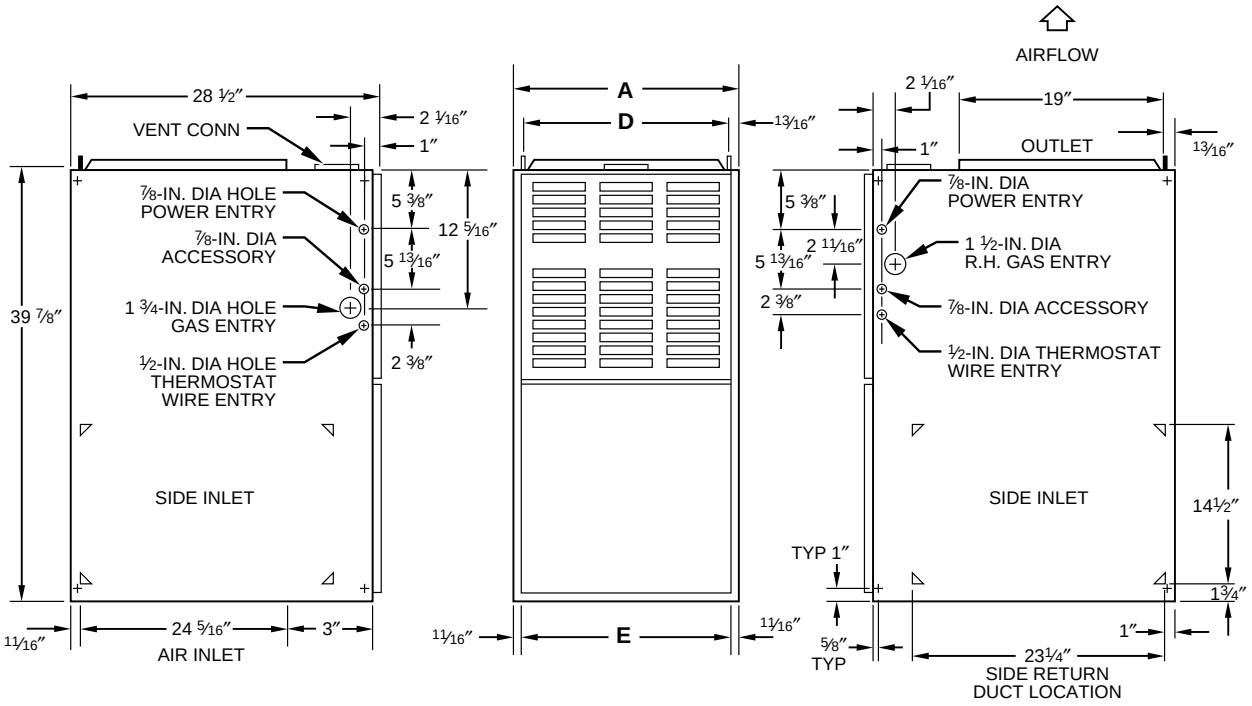
PREPAINTED CABINET—The 395CAV uses prepainted sheet metal for the cabinet. This is the same high-quality finish found on refrigerators and other appliances today. We ensure its durability by using a galvanized steel substrate to provide superior rust protection.

PATENTED BLOCKED VENT SAFEGUARD—Our induced-combustion furnace has a patented blocked vent safeguard. The safeguard will stop furnace operation if the vent system becomes blocked or is not operating properly. An exclusive with the 395CAV Furnace.

EASY INSTALLATION—The model 395CAV has many features that make installation easier: left or right gas and electrical connections, Molex blower speed selector, matching coil sizes, accessory low-voltage connections, and many more.

QUIET OPERATION—A soft mount inducer assembly and slow opening gas valve improves sound level.

Form No. PDS 395CAV.40.6



NOTES: 1. Two additional ⅞-in. dia holes are located in the top plate.
2. Minimum return-air opening at furnace:
   a. For 800 CFM–16-in. round or 14½ x 12-in. rectangle.
   b. For 1200 CFM–20-in. round or 14½ x 19½-in. rectangle.
   c. For 1600 CFM–22-in. round or 14½ x 23¼-in. rectangle.
   d. For airflow requirements above 1800 CFM, use both side inlets, a combination of 1 side inlet and the bottom, or the bottom only.

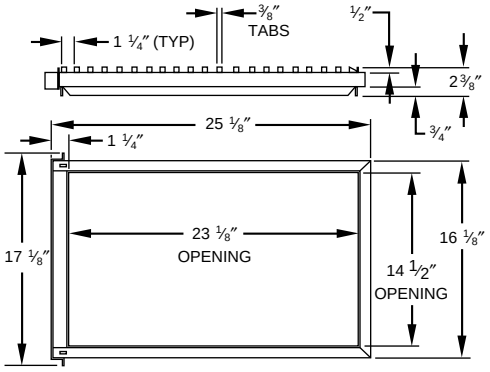
A98025

DIMENSIONS (In.)

UNIT SIZE	A	D	E	VENT CONN* (Dia)	SHIPPING WEIGHT (Lb)
024045	14-3/16	12-9/16	11-11/16	4	122
036045	14-3/16	12-9/16	11-11/16	4	124
024070	14-3/16	12-9/16	11-11/16	4	132
036070	14-3/16	12-9/16	11-11/16	4	134
042091	17-1/2	15-7/8	16	4	150
048091	21	19-3/8	18-1/2	4	154
036111	17-1/2	15-7/8	16	4	160
048111	21	19-3/8	18-1/2	4	166
060111	24-1/2	22-7/8	22	4	184
048135	21	19-3/8	18-1/2	5†	178
060135	24-1/2	22-7/8	22	5†	194
060155	24-1/2	22-7/8	22	5†	204

* Refer to the furnace Installation Instructions for proper venting procedures.
† Oval collar

OPTIONAL SIDE FILTER RACK



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MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

MINIMUM INCHES CLEARANCE TO COMBUSTIBLE CONSTRUCTION

This forced air furnace is equipped for use with natural gas at altitudes 0 - 10,000 ft (0-3,050m).

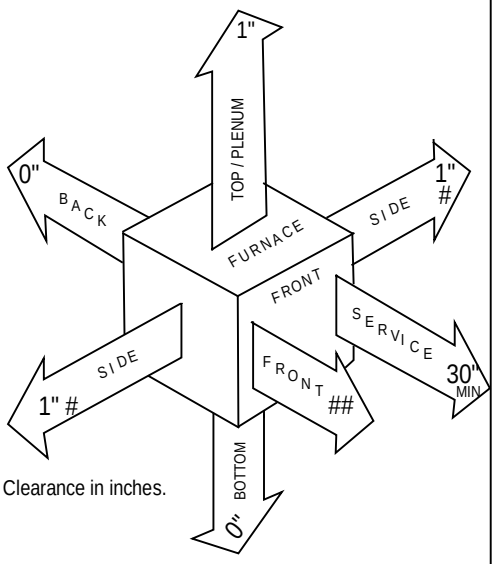
An accessory kit, supplied by the manufacturer, shall be used to convert to propane gas use or may be required for some natural gas applications.

This furnace is for indoor installation in a building constructed on site.

This furnace may be installed on combustible flooring in alcove or closet at minimum clearance from combustible material.

This furnace may be used with a Type B-1 Vent and may be vented in common with other gas-fired appliances.

This furnace is approved for UPFLOW installations only.



Clearance in inches.

For furnaces wider than 14.25 inches (362mm) may be 0 inches.

For single wall vent type 6 inches. For Type B-1 vent type 3 inches.

Vent Clearance to combustibles:
For Single Wall vents 6 inches (6 po).
For Type B-1 vent type 1 inch (1 po).

320325-101 REV. G (LIT)

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CONTROLS—THERMOSTATS AND ZONING

THERMOSTAT—NON-PROGRAMMABLE	For Use with 1-Speed Air Conditioner—TSTATBHNAC01-A For Use with 2-Speed Air Conditioner—TSTATBHN2S01-A For Use with 2-Speed Heat Pump—TSTATBHN2S01-A
THERMOSTAT—PROGRAMMABLE	For Use with 1-Speed Air Conditioner—TSTATBHPAC01-A For Use with 2-Speed Air Conditioner—TSTATBHP2S01-A For Use with 1-Speed Heat Pump—TSTATBHPDF01-A For Use with 2-Speed Heat Pump—TSTATBHP2S01-A or TSTATBHPDF01-A
THERMIDISTAT—PROGRAMMABLE THERMOSTAT with Humidity Control	TSTATBHPRH01-A
ZONING—2-ZONE	ZONEBB2KIT01, ZONEKIT2ZBDP
ZONING—4-ZONE	ZONEBB4KIT01

SPECIFICATIONS

UNIT SIZE		024045	036045	024070	036070	042091	048091
RATINGS AND PERFORMANCE							
Input Btuh*		44,000	44,000	66,000	66,000	88,000	88,000
Output Capacity (Btuh)†	Nonweatherized ICS	35,000	35,000	53,000	53,000	71,000	71,000
AFUE†	Nonweatherized ICS	80.0	80.0	80.0	80.0	80.0	80.0
Certified Temperature Rise Range °F		25—55	15—45	40—70	30—60	40—70	30—60
Certified External Static Pressure	Heat/Cool	0.10/0.50	0.10/0.50	0.12/0.50	0.12/0.50	0.15/0.50	0.15/0.50
Airflow CFM‡	Heating	855	980	830	1140	1170	1445
	Cooling	880	1250	880	1195	1360	1740
ELECTRICAL							
Unit Volts—Hertz—Phase		115—60—1					
Operating Voltage Range	Min—Max	104—127					
Maximum Unit Amps		6.0	8.3	5.9	8.7	9.0	10.4
Maximum Wire Length (Measured 1 Way in Ft)		47	34	47	32	31	27
Minimum Wire Size		14					
Maximum Fuse Size		15					
Transformer (24v)		40va					
External Control	Heating	12va					
Power Available	Cooling	35va					
Air Conditioning Blower Relay		Standard					
CONTROLS							
Limit Control		SPST					
Heating Blower Control		Solid-State Time Operation					
Burners (Monoport)		2	2	3	3	4	4
Gas Connection Size		1/2-in. NPT					
GAS CONTROLS							
Gas Valve (Redundant)		White Rodgers					
	Min Inlet Pressure (In. wc)	4.5 (Natural Gas)					
	Max Inlet Pressure (In. wc)	13.6 (Natural Gas)					
Ignition Device		Hot Surface					
BLOWER DATA							
Direct-Drive Motor HP (PSC)		1/5	1/3	1/5	1/3	1/3	1/2
Motor Full Load Amps		2.9	5.8	2.9	5.8	5.8	7.9
RPM (Nominal)—Speeds		1075—3	1075—4	1075—3	1075—4	1075—4	1075—4
Blower Wheel Diameter x Width (In.)		10 x 6	10 x 6	10 x 6	10 x 6	10 x 7	10 x 8
Filter Size (In.)—Permanent Washable (Supplied)		(1) 16 x 25 x 1					(1) 20 x 25 x 1
FACTORY-AUTHORIZED DEALER-INSTALLED ACCESSORIES							
Twinning Kit		N/A					KGATW0401HSI
Gas Conversion Kit—Natural-to-Propane		KGANP2001ALL					
Gas Conversion Kit—Propane-to-Natural		KGAPN1601ALL					
Side Filter Rack Accepts 1 Filter (In.)		KGAFR0201ALL (Filter Size 16 x 25 x 1)					
Air Cleaner		Model AIRA or 902B					
Humidifier		Model 912D, 912E, 913B, 913C, or 914A					
Ventilator		Model VA3B, VB5B, VC5B, or VL3A					

* Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 4 percent for each 1000 ft above sea level. Refer to National Fuel Gas Code Table F4 or furnace Installation Instructions. In Canada, derate the unit 10 percent for elevations 2000 ft to 4500 ft above sea level.

† Capacity and AFUE in accordance with U.S. government DOE test procedures.

‡ Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace be used for return air. A filter is required for each return-air supply.

ICS—Isolated Combustion System

N/A—Not Applicable

SPECIFICATIONS

UNIT SIZE		036111	048111	060111	048135	060135	060155
RATINGS AND PERFORMANCE							
Input Btuh*		110,000	110,000	110,000	132,000	132,000	154,000
Capacity (Btuh)†	Nonweatherized ICS	89,000	89,000	89,000	107,000	107,000	124,000
AFUE†	Nonweatherized ICS	80.0	80.0	80.0	80.0	80.0	80.0
Certified Temperature Rise Range °F		55—85	45—75	25—55	50—80	40—70	50—80
Certified External Static Pressure	Heat/Cool	0.20/0.50	0.20/0.50	0.20/0.50	0.20/0.50	0.20/0.50	0.20/0.50
Airflow CFM‡	Heating	1175	1415	1750	1645	1775	1770
	Cooling	1205	1575	2225	1620	2025	2055
ELECTRICAL							
Unit Volts—Hertz—Phase		115—60—1					
Operating Voltage Range Min—Max		104—127					
Maximum Unit Amps		8.0	10.1	14.4	10.1	13.3	14.0
Maximum Wire Length (Measured 1 Way in Ft)		35	28	31	28	33	31
Minimum Wire Size		14	14	12	14	12	12
Maximum Fuse Size		15	15	20	15	20	20
Transformer (24v)		40va					
External Control	Heating	12va					
Power Available	Cooling	35va					
Air Conditioning Blower Relay		Standard					
CONTROLS							
Limit Control		SPST					
Heating Blower Control		Solid-State Time Operation					
Burners (Monoport)		5	5	5	6	6	7
Gas Connection Size		1/2-in. NPT					
GAS CONTROLS							
Gas Valve (Redundant)		White Rodgers					
	Min Inlet Pressure (In. wc)	4.5 (Natural Gas)					
	Max Inlet Pressure (In. wc)	13.6 (Natural Gas)					
Ignition Device		Hot Surface					
BLOWER DATA							
Direct-Drive Motor HP (PSC)		1/3	1/2	3/4	1/2	3/4	3/4
Motor Full Load Amps		5.8	7.9	11.1	7.9	11.1	11.1
RPM (Nominal)—Speeds		1075—4	1075—4	1075—4	1075—4	1075—4	1075—4
Blower Wheel Diameter x Width (In.)		10 x 7	10 x 8	11 x 10	10 x 8	11 x 10	11 x 10
Filter Size (In.)—Permanent Washable		(1) 16x25x1	(1) 20x25x1	(1) 24x29x1	(1) 20x25x1	(1) 24 x 29 x 1	
FACTORY-AUTHORIZED DEALER-INSTALLED ACCESSORIES							
Twinning Kit		N/A	KGATW0401HSI				
Gas Conversion Kit—(Natural-to-Propane)		KGANP2001ALL					
Gas Conversion Kit—(Propane-to-Natural)		KGAPN1601ALL					
Side Filter Rack Accepts 1 Filter (In.)		KGAFR0201ALL (Filter Size 16 x 25 x 1)					
Air Cleaner		Model AIRA or 902B					
Humidifier		Model 912D, 912E, 913B, 913C, or 914A					
Ventilator		Model VA3B, VB5B, VC5B, or VL3A					

* Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 4 percent for each 1000 ft above sea level. Refer to National Fuel Gas Code Table F4 or furnace Installation Instructions. In Canada, derate the unit 10 percent for elevations 2000 ft to 4500 ft above sea level.

† Capacity and AFUE in accordance with U.S. government DOE test procedures.

‡ Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace be used for return air. A filter is required for each return-air supply.

ICS—Isolated Combustion System

N/A—Not Applicable

AIR DELIVERY—CFM (With Filters)*

UNIT SIZE	BLOWER MOTOR HP	SPEED	EXTERNAL STATIC PRESSURE (IN. WC)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
024045	1/5 PSC	High	1030	1005	970	925	880	815	745	615
		Med-High	855	830	800	765	720	670	595	485
		Med-Low	755	725	695	650	605	555	475	400
036045	1/3 PSC	High	1490	1430	1385	1325	1250	1175	1085	975
		Med-High	1335	1305	1270	1230	1160	1090	1005	915
		Med-Low	1140	1130	1105	1075	1030	975	900	830
		Low	980	975	965	915	875	840	785	715
024070	1/5 PSC	High	1040	1010	975	935	880	810	735	640
		Med-High	855	830	800	765	715	660	600	490
		Med-Low	745	715	690	650	605	550	475	385
036070	1/3 PSC	High	1430	1380	1325	1265	1195	1125	1045	945
		Med-High	1310	1275	1235	1190	1135	1065	990	900
		Med-Low	1140	1130	1100	1065	1000	965	910	815
		Low	990	965	960	935	905	855	800	710
042091	1/3 PSC	High	1570	1535	1480	1415	1360	1280	1185	1070
		Med-High	1370	1355	1330	1290	1240	1170	1080	955
		Med-Low	1170	1165	1150	1115	1085	1035	970	880
		Low	1010	1005	990	965	950	905	845	745
048091	1/2 PSC	High	2010	1950	1875	1810	1740	1660	1550	1455
		Med-High	1675	1660	1625	1600	1545	1490	1395	1295
		Med-Low	1445	1430	1415	1400	1370	1325	1265	1170
		Low	1260	1260	1260	1250	1210	1180	1115	1030
036111	1/3 PSC	High	1470	1415	1340	1270	1205	1115	985	845
		Med-High	1340	1305	1245	1185	1130	1045	915	780
		Med-Low	1185	1175	1140	1075	1030	950	835	705
		Low	1015	1010	980	955	910	840	725	600
048111	1/2 PSC	High	1880	1815	1745	1690	1575	1500	1400	1265
		Med-High	1660	1615	1570	1505	1435	1355	1260	1170
		Med-Low	1455	1410	1375	1350	1290	1235	1145	985
		Low	1265	1265	1240	1210	1180	1110	995	855
060111	3/4 PSC	High	—	2465	2385	2305	2225	2125	2020	1910
		Med-High	2125	2120	2075	2040	1985	1900	1825	1715
		Med-Low	1745	1750	1740	1720	1685	1635	1565	1500
		Low	1545	1545	1545	1520	1495	1450	1390	1330
Both Sides or 1 Side & Bottom		High	2475	2465	2425	2365	2305	2230	2145	2015
		NO Filter	—	2510	2465	2415	2355	2280	2190	2070
048135	1/2 PSC	High	1900	1845	1780	1705	1620	1530	1445	1320
		Med-High	1695	1645	1580	1520	1460	1385	1280	1155
		Med-Low	1460	1415	1375	1340	1290	1205	1110	—
		Low	1275	1260	1245	1230	1180	1135	—	—
060135	3/4 PSC	High	—	2260	2185	2085	2025	1935	1835	1730
		Med-High	2110	2070	2015	1960	1885	1810	1715	1620
		Med-Low	1790	1775	1755	1720	1670	1610	1535	1455
		Low	1495	1500	1515	1485	1450	1400	1345	1270
060155	3/4 PSC	High	—	2300	2235	2155	2055	1980	1870	1775
		Med-High	—	2050	2005	1945	1880	1805	1720	1640
		Med-Low	1790	1770	1740	1710	1635	1580	1520	1440
		Low	1520	1525	1505	1485	1450	1410	1350	1290

* Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace to be used for return air. A filter is required for each return-air supply.

— Indicates unstable operating conditions.

SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

Classroom Service Training plus "hands-on" the products in our labs can mean increased confidence that really pays dividends in faster troubleshooting, fewer callbacks. Course descriptions and schedules are in our catalog.

CALL FOR FREE CATALOG 1-800-962-9212

[ ] Packaged Service Training [ ] Classroom Service Training

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS

Cancels: PDS 395CAV.40.5B

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PRINTED IN U.S.A. Catalog No. 5239-500 1-98